



RESPIRATORY DISEASE OUTBREAKS

(See [Influenza](#), [Pertussis](#), or [Legionellosis](#) if suspected)

Note: Suspected respiratory outbreaks should be initially reported as respiratory outbreaks (unknown) until laboratory testing confirms the etiology. Report forms are the same as those used for reporting influenza outbreaks, however until one case of a lab confirmed pathogen is identified, outbreaks should be reported as general respiratory outbreak unknown.

1. **Agents:** Influenza viruses, *Mycoplasma pneumoniae*, adenovirus, respiratory syncytial virus, rhinovirus, parainfluenza viruses, *Legionella* spp., group A streptococcus, human metapneumovirus, and coronavirus. For more information on [influenza](#), [pertussis](#), or [legionellosis](#) see the appropriate chapter.
2. **Identification:**
 - a. **Symptoms:** Varies with agent. General symptoms include fever, upper or lower respiratory congestion, cough, sore throat, shortness of breath, chills, headache, myalgia, malaise, and sometimes gastrointestinal (GI) symptoms. **Influenza-Like Illness (ILI)/ Acute Febrile Respiratory Illness (AFRI) refers to:** Fever ($\geq 100^{\circ}\text{F}$ or 37.8°C) **plus** cough and/or sore throat in the absence of a known cause other than influenza.
 - b. **Differential Diagnosis:** Agents that cause febrile respiratory illnesses or community acquired pneumonia including but are not limited to influenza, *Mycoplasma pneumoniae*, adenovirus, respiratory syncytial virus, rhinoviruses, parainfluenza viruses, *Legionella* spp., group A streptococcus, human metapneumovirus, and coronavirus. For more information on [influenza](#), [pertussis](#), or [legionellosis](#) see the appropriate chapter.
 - c. **Diagnosis:** Clinical syndrome associated with community outbreaks, confirmed by viral culture, PCR, rapid antigen test, DFA/IFA test, or other test.
3. **Incubation:** Varies with agent. Bacterial infections generally have longer incubation times than viral infections.

4. **Reservoir:** Varies with agent; mostly human.
5. **Source:** Mostly droplet spread by nasal or pharyngeal secretions and sometimes fomites.
6. **Transmission:** Droplet spread or contaminated fomites from infective persons.
7. **Communicability:** Varies with agent. On average, up to 2 days prior to and through 1 day after resolution of fever; may be longer in children or in patients with compromised immune systems.
8. **Specific Treatment:** Supportive care (e.g., rest, antipyretics, fluids, etc.). Bacterial infections require antibiotic treatment. With influenza, antiviral medications may reduce the severity and duration of influenza illness if administered within 48 hours of onset. Serious infections with RSV may be prevented with the antiviral Synagis® (palivizumab).
9. **Immunity:** Varies by agent.

REPORTING PROCEDURES

1. Respiratory Outbreak Definitions:

Under Title 17, Section 2500, *California Code of Regulations* all suspected outbreaks are reportable.

Healthcare-associated institutions associated with long term health care (i.e. skilled nursing facilities, intermediate care facility, and intermediate care for developmentally disabled): A sudden increase of acute febrile respiratory illness cases over the normal background rate; OR at least one case of laboratory-confirmed influenza or other respiratory pathogen in the setting of a cluster (≥ 2 cases) of ILI within a 72-hour period.

Non healthcare-associated institutions defined as prison, jail, university dormitory and overnight camps: At least two cases of ILI within 48-72 hour period; OR at least one case of ILI with laboratory confirmation for influenza or other respiratory pathogen in the setting of a cluster (≥ 2 cases) of ILI.



Congregate Settings defined as schools and day camps: At least 10% of average daily attendance absent with ILI sustained over a 3-day period; OR 20% of an epidemiologically-linked group (such as a single classroom, sports team, or after-school group) ill with similar symptoms, with a minimum of 5 ill, sustained over a 3-day period.

2. Report Forms: SEE TABLE 1

- a. Use the following forms for outbreaks at various settings:

i. **Non healthcare-associated institution**

**INITIAL ASSESSMENT OF
RESPIRATORY OUTBREAK REPORT
(working form, not required to submit)**

Line List-Non-Healthcare Facility for
Students, Staff, or Residents (**PDF**
EXCEL) *Required

**ACUTE RESPIRATORY ILLNESS
OUTBREAK REPORT FORM (CDPH
9003 08/16)** *Required

ii. **Healthcare-associated institutions**

For initial and final reports of respiratory
outbreaks:

**CD OUTBREAK INVESTIGATION —
SUB-ACUTE HEALTH CARE FACILITY
(H-1164-SubAcute, fillable)**

Line List - Respiratory Outbreak for
Residents and Staff (**PDF EXCEL**)
*Required

**ACUTE RESPIRATORY ILLNESS
OUTBREAK REPORT FORM (CDPH
9003 08/16)** *Required

3. Epidemiologic Data for Outbreaks:

- a. Establish a case definition (i.e., fever [measured or reported] and either cough, sore throat, or stuffy nose): include pertinent clinical symptoms and laboratory data (if appropriate).

- b. Confirm etiology of outbreak using laboratory data (rapid test, culture, or PCR).
- c. Create line list that could include:
- names of cases
 - dates of onset
 - symptoms
 - age
 - hospitalization status
 - results of laboratory tests
 - prior immunization history
 - epi links to other cases (room #s, grades in school, etc.)
 - avian or swine exposure, if relevant
- d. Maintain surveillance for new cases until rate of AFRI is down to “normal” or no new cases for 1 week.
- e. Create an epi-curve, by date of onset. Only put those that meet the case definition on the epi-curve. (Optional)

CONTROL OF CASE, CONTACTS & CARRIERS

CASE: Varies by agent.

Precautions: None. Advise symptomatic individuals to stay away from work or school for at least 24 hours after resolution of fever. Limit exposure to others, especially those at high risk for complications.

CONTACTS: No restrictions.

CARRIERS: Not applicable.

GENERAL CONTROL RECOMMENDATIONS FOR OUTBREAKS

- Reinforce good hand hygiene among all (including residents/patients, visitors, staff, and residents/students).
- Emphasize respiratory etiquette (cover cough and sneezes, dispose of tissues properly).
- Reinforce staying home when sick.
- Provide posters and health education about hand hygiene and respiratory etiquette.
- Discourage sharing water bottles.
- Emphasize importance of early detection of cases and removing them from contact with others.



7. Encourage regular environmental cleaning with EPA registered disinfectant appropriate for respiratory pathogens.
8. Consider canceling group activities.
9. Provide educational materials to facility—including posters, handouts, etc. For influenza and respiratory virus health education materials see: <http://publichealth.lacounty.gov/acd/HealthEdFlu.htm>

Consider the additional recommendations for healthcare-associated institutions, especially with high risk patients:

1. Close facility or affected areas to new admissions until 1 week after last case.
2. Suspend group activities until 1 week after last case.
3. If possible, separate staff that cares for sick from staff that cares for well patients.
4. Institute droplet precautions for symptomatic individuals.
5. Refer to Los Angeles County Department of Public Health [Influenza Outbreak Prevention and Control Guidelines for Skilled Nursing Facilities\(6/2015\)](#) **or** California Department of Public Health [Recommendations For The Prevention And Control Of Influenza California Long-Term Care Facilities \(Revised October 2016\)](#) **or** Centers for Disease Control and Prevention (CDC) [Interim Guidance for Influenza Outbreak Management in Long-Term Care Facilities | Health Professionals | Seasonal Influenza \(Flu\)](#)

DIAGNOSTIC PROCEDURES

Clinical and epidemiologic histories are required to aid in laboratory test selection.

Nasopharyngeal (NP) or nasal swab, and nasal wash or aspirate. Public Health Laboratory (PHL) recommends Dacron or Nylon flocked swabs, do NOT use wooden swabs. NP swabs are preferred because the specimens can be tested for influenza

and a variety of other respiratory pathogens using PCR based technology. All other specimens can only be tested for influenza. Samples should be collected within the first 4 days of illness. Collect specimens from **at least 2 separate symptomatic individuals** and up to 5 symptomatic individuals for any community-based outbreak and select those individuals with the most recent onset for specimen collection.

Container: Viral Culturette with M4 viral transport medium.

Laboratory Form: [Public Health Laboratory Test Requisition Form\(01/14\)](#) or online request if electronically linked to the PHL.

Examination: Influenza PCR and/or Respiratory Pathogen PCR Panel. Testing algorithm is determined by the PHL.

Material: Nasopharyngeal swab preferred; nasal swab can be used if necessary. See: [MD/ND Policy 117 Nasopharyngeal Specimen Collection; Competency Checklist for Nasopharyngeal Specimen Collection](#)

Storage: Keep refrigerated and upright. Deliver to Public Health Laboratory as soon as possible. Additional specimen and storage information can be found here: [LA County Department of Public Health - Public Health Laboratory](#)

PREVENTION/EDUCATION

Guidance should be based on the specific agent that caused AFRI or community acquired pneumonia if possible.

Additional information can be found in the appropriate B-73 [Influenza](#), [Pertussis](#), or [Legionellosis](#) chapters.



TABLE 1. RESPIRATORY DISEASE OUTBREAK FORMS

NON HEALTHCARE-ASSOCIATED INSTITUTIONS	INITIAL REPORT	FINAL REPORT
<ul style="list-style-type: none"> ○ Congregate settings- Schools and day camps ○ Non healthcare-associated institutions(i.e. jail, juvenile hall, camps, university dormitory, and overnight camps) 	<u>INITIAL ASSESSMENT OF RESPIRATORY OUTBREAK REPORT</u> (optional)	<u>Acute Respiratory Illness Outbreak Report Form (CDPH 9003 08/16)</u> *Required Line List-Non-Healthcare Facility for Students, Staff, or Residents (<u>PDF EXCEL</u>) *Required
HEALTHCARE-ASSOCIATED INSTITUTIONS	INITIAL REPORT	FINAL REPORT
<ul style="list-style-type: none"> ○ Skilled nursing facility ○ Intermediate care facility ○ Intermediate care for developmentally disabled 	<u>CD OUTBREAK INVESTIGATION — SUB-ACUTE HEALTH CARE FACILITY (H-1164-SubAcute, fillable) (instructions)</u>	<u>CD OUTBREAK INVESTIGATION — SUB-ACUTE HEALTH CARE FACILITY (H-1164-SubAcute, fillable)</u> Line List - Respiratory Outbreak for Residents and Staff (<u>PDF EXCEL</u>) *Required <u>Acute Respiratory Illness Outbreak Report Form (CDPH 9003 08/16)</u> *Required